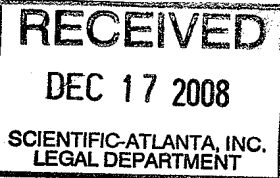


# PATENT COOPERATION TREATY



From the INTERNATIONAL SEARCHING AUTHORITY

## PCT

NOTIFICATION OF TRANSMITTAL OF  
THE INTERNATIONAL SEARCH REPORT AND  
THE WRITTEN OPINION OF THE INTERNATIONAL  
SEARCHING AUTHORITY, OR THE DECLARATION

To:  
SCIENTIFIC-ATLANTA, INC.  
Attn. Barnhardt, Hubert J. III  
Intellectual Property Department  
5030 Sugarloaf Parkway  
Lawrenceville, GA 30044  
ETATS-UNIS D'AMERIQUE

(PCT Rule 44.1)

|  |  |
|--|--|
| Date of mailing<br>(day/month/year)                | 15/12/2008   |
| Applicant's or agent's file reference<br>P-9359-PC | <b>FOR FURTHER ACTION</b> See paragraphs 1 and 4 below |
| International application No.<br>PCT/US2008/070856 | International filing date<br>(day/month/year)          |
| 23/07/2008   |  |
| Applicant<br><br>SCIENTIFIC-ATLANTA, INC.          |  |

1. ☒ The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.

**Filing of amendments and statement under Article 19:**

The applicant is entitled, if he so wishes, to amend the claims of the International Application (see Rule 46):

**When?** The time limit for filing such amendments is normally two months from the date of transmittal of the International Search Report.

**Where?** Directly to the International Bureau of WIPO, 34 chemin des Colombettes  
1211 Geneva 20, Switzerland, Facsimile No.: (41-22) 338.82.70

**For more detailed instructions,** see the notes on the accompanying sheet.

2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.

3. ☐ **With regard to the protest** against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

- ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.  
☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

**4. Reminders**

Shortly after the expiration of **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for international publication.

The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. These comments would also be made available to the public but not before the expiration of 30 months from the priority date.

Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase **until 30 months** from the priority date (in some Offices even later); otherwise, the applicant must, **within 20 months** from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months.

See the Annex to Form PCT/IB/301 and, for details about the applicable time limits, Office by Office, see the *PCT Applicant's Guide*, Volume II, National Chapters and the WIPO Internet site.

|  |  |
|--|--|
| Name and mailing address of the International Searching Authority<br><br>European Patent Office, P.B. 5818 Patentlaan 2<br>NL-2280 HV Rijswijk<br>Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,<br>Fax: (+31-70) 340-3016 | Authorized officer<br><br>Agnieszka Arias-Kraska |
|--|--|

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

|  |  |   |
|--|--|---|
| Applicant's or agent's file reference<br><br>P-9359-PC | <b>FOR FURTHER ACTION</b><br><small>see Form PCT/ISA/220 as well as, where applicable, item 5 below.</small> |   |
| International application No.<br><br>PCT/US2008/070856 | International filing date (day/month/year)<br><br>23/07/2008   | (Earliest) Priority Date (day/month/year)<br><br>31/07/2007 |
| Applicant<br><br>SCIENTIFIC-ATLANTA, INC.              |  |   |

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being-transmitted to the International Bureau.

This international search report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of:

- ☒ the international application in the language in which it was filed  
☐ a translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6bis(a)).

c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box No. II)

3. ☐ **Unity of invention is lacking** (see Box No III)

4. With regard to the **title**,

- ☒ the text is approved as submitted by the applicant  
☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

- ☒ the text is approved as submitted by the applicant  
☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority

6. With regard to the **drawings**,

- a. the figure of the **drawings** to be published with the abstract is Figure No. 8  
☐ as suggested by the applicant  
☐ as selected by this Authority, because the applicant failed to suggest a figure  
☒ as selected by this Authority, because this figure better characterizes the invention
- b. ☐ none of the figures is to be published with the abstract

# INTERNATIONAL SEARCH REPORT

International application No  
PCT/US2008/070856

**A. CLASSIFICATION OF SUBJECT MATTER**  
INV. H04N5/765 H04N5/45  
ADD. H04N5/783

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
H04N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

| Category* | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No. |
|-----------|---|-----------------------|
| X         | US 2006/093320 A1 (HALLBERG BRYAN S [US]<br>ET AL) 4 May 2006 (2006-05-04)<br>figure 1<br>figure 4<br>paragraph [0007] - paragraph [0009]<br>paragraph [0066] - paragraph [0075]<br>paragraph [0082]<br>paragraph [0108] - paragraph [0113] | 1-20                  |
| A         | EP 1 161 089 A (MATSUSHITA ELECTRIC IND CO<br>LTD [JP]) 5 December 2001 (2001-12-05)<br>figure 1<br>paragraph [0018]<br>paragraph [0019]<br>paragraph [0023]<br>paragraph [0065]  | 1-20                  |
|           | -----<br>-/--   |                       |

☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

\* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*G\* document member of the same patent family

Date of the actual completion of the international search

4 December 2008

Date of mailing of the international search report

15/12/2008

Name and mailing address of the ISA/  
European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040,  
Fax: (+31-70) 340-3016

Authorized officer

Franchitti, Thomas

# INTERNATIONAL SEARCH REPORT

International application No  
PCT/US2008/070856

## C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages   | Relevant to claim No. |
|-----------|--|-----------------------|
| A         | <p>US 2003/170003 A1 (LEVESQUE ALAIN P [US]<br/>ET AL LEVESQUE ALAIN P [CA] ET AL)<br/>11 September 2003 (2003-09-11)<br/>figure 3<br/>figure 5<br/>figure 6<br/>paragraph [0042]</p> <p style="text-align: center;">-----</p> | 1-20                  |

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No

PCT/US2008/070856

| Patent document<br>cited in search report |    | Publication<br>date |      | Patent family<br>member(s) |  | Publication<br>date |
|---|----|---------------------|------|----------------------------|--|---------------------|
| US 2006093320                             | A1 | 04-05-2006          | WO   | 2006050223 A2              |  | 11-05-2006          |
| EP 1161089                                | A  | 05-12-2001          | NONE |                            |  |                     |
| US 2003170003                             | A1 | 11-09-2003          | MX   | PA00008659 A               |  | 16-12-2002          |

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

## PCT

### WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

To:

see form PCT/ISA/220

Date of mailing  
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference  
see form PCT/ISA/220

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
PCT/US2008/070856

International filing date (day/month/year)  
23.07.2008

Priority date (day/month/year)  
31.07.2007

International Patent Classification (IPC) or both national classification and IPC  
INV. H04N5/765 H04N5/45  
ADD. H04N5/783

Applicant  
SCIENTIFIC-ATLANTA, INC.

**1. This opinion contains indications relating to the following items:**

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

**2. FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

**3. For further details, see notes to Form PCT/ISA/220.**

Name and mailing address of the ISA:



European Patent Office - P.B. 5818 Patentlaan 2  
NL-2280 HV Rijswijk - Pays Bas  
Tel. +31 70 340 - 2040 Tx: 31 651 epo nl  
Fax: +31 70 340 - 3016

Date of completion of  
this opinion

see form  
PCT/ISA/210

Authorized Officer

Franchitti, Thomas

Telephone No. +31 70 340-4161



**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/US2008/070856

---

**Box No. I Basis of the opinion**

---

1. With regard to the **language**, this opinion has been established on the basis of:
  - ☒ the international application in the language in which it was filed
  - ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43bis.1(a))
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:
    - ☐ a sequence listing
    - ☐ table(s) related to the sequence listing
  - b. format of material:
    - ☐ on paper
    - ☐ in electronic form
  - c. time of filing/furnishing:
    - ☐ contained in the international application as filed.
    - ☐ filed together with the international application in electronic form.
    - ☐ furnished subsequently to this Authority for the purposes of search.
4. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

---

**Box No. II Priority**

---

1. ☒ The validity of the priority claim has not been considered because the International Searching Authority does not have in its possession a copy of the earlier application whose priority has been claimed or, where required, a translation of that earlier application. This opinion has nevertheless been established on the assumption that the relevant date (Rules 43bis.1 and 64.1) is the claimed priority date.
2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43bis.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.
3. Additional observations, if necessary:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/US2008/070856

---

**Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

---

1. Statement

|                               |             |                       |
|-------------------------------|-------------|-----------------------|
| Novelty (N)                   | Yes: Claims | <u>4-10,12,15-20</u>  |
|                               | No: Claims  | <u>1,2,3,11,13,14</u> |
| Inventive step (IS)           | Yes: Claims |                       |
|                               | No: Claims  | <u>1-20</u>           |
| Industrial applicability (IA) | Yes: Claims |                       |
|                               | No: Claims  | <u>1-20</u>           |

2. Citations and explanations

**see separate sheet**



Re Item V.

- 1 Reference is made to the following document:

D1 : US 2006/093320 A1 (HALLBERG BRYAN S [US] ET AL) 4 May 2006 (2006-05-04)

2 INDEPENDENT CLAIM 1

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of **claim 1** is not new in the sense of Article 33(2) PCT.

- 2.1 With respect to **claim 1**, the document **D1** discloses (the references in parentheses applying to this document):

*A method (**figure 4; paragraphs 66-75**), comprising the steps of:*

- (a) receiving a sequence of digitized uncompressed pictures corresponding to a first video program (**numeral 210, paragraph 67, sentence 2**);*
- (b) producing a first video stream of compressed pictures, each of the compressed pictures corresponding to a picture in the received sequence of digitized uncompressed pictures, wherein the first video stream is produced by a video compression engine (**numerals 220, 230**);*
- (c) producing reconstructed pictures corresponding to a decompressed version of respective compressed pictures in the first video stream, wherein the reconstructed pictures are produced by the video compression engine (**numerals 250, 260, ref. path 2, paragraphs 71 and 75**); and*
- (d) providing a presentation of the first video program from the reconstructed pictures produced by the video compression engine (**numeral 270**).*

Therefore, the subject-matter of **claim 1** is not new in the sense of Article 33(2) PCT.

3 INDEPENDENT CLAIM 13

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of **claim 13** is not new in the sense of Article 33(2) PCT.

3.1 With respect to **claim 13**, the document **D1** discloses (the references in parentheses applying to this document):

*A system (figure 4, paragraphs 66-75), comprising a video compression engine (numerals 220, 230, 250, 260) configured to:*

- *provide reconstructed pictures "corresponding to a real-time presentation" of a video program (numerals 250, 260; ref. path 3);*
- *provide a compressed version of the real-time presentation (numerals 220, 230; ref. path 3, paragraph 75); and*
- *store the compressed version of the real-time presentation to a persistent storage device (numeral 240, ref. path 3, paragraph 75) while simultaneously providing the reconstructed pictures for the real-time presentation of the video program (paragraph 75).*

Therefore, the subject-matter of **claim 13** is not new in the sense of Article 33(2) PCT.

4 DEPENDENT CLAIMS 2-12 AND 14-20

Dependent **claims 2-12** and **14-20** do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty or inventive step (Article 33(2) and (3) PCT).

Claim 2: Storing the first video stream to a persistent storage device while simultaneously providing the reconstructed pictures for the presentation of the first video program is known from **D1 (figure 4, numeral 240, ref. path 3, paragraph 75)**.

Claim 3: The expression *further comprises* which is used to introduce an **additional** feature to the subject-matter of **claims 2** is actually followed by *the step of only providing reference pictures* which is more restrictive in the sense that in **claim 2** both reference and non-reference pictures are provided. Therefore, **claim 3** can be considered as not adding anything new to **claim 2**.

It is also pointed out that performing trick play on the first video program is known from **D1 (paragraph 9)** and it is well known that trick play can be achieved by providing only reference pictures.

Claim 4: The expression *simultaneously on a real-time basis* is not clear and therefore, no inventive step can be derived.

Claim 5: The feature *the second video program* is neither defined in **claim 5**, nor in its parent claims, thereby rendering the subject-matter of **claim 5** unclear. Therefore, no inventive step can be derived.

Claim 6: The expression *a video quality of a future presentation of the stored first video program equals a video quality of the presentation of the first video program* defines the subject-matter in terms of the result to be achieved, which merely amounts to a statement of the underlying problem, without providing the technical features necessary for achieving this result. Therefore, no inventive step can be derived from **claim 6**.

Claim 7: Does not add anything new to **claim 1** (see claim 3).

Claim 8: see claim 4

Claim 9: The expression *from non-reference pictures* is unclear because reference pictures are required anyway in order to reconstruct the non-reference pictures. It is also pointed out that picture-in-picture is well known.

Claim 10: see claim 6

Claim 11: Delaying a display of the video program by one "picture time delay" is known from **D1 (paragraph 70)**.

Claim 12: The expression *a reconstructed pictures* is not coherent and it is also pointed out that picture-in-picture is well known.

Claim 14: Although **claim 14** is drafted as a dependent claim, it contains a subset of the features of **claim 13**. Therefore, **claim 14** should be drafted as an independent claim and **claim 13** as a dependent claim.

**Claim 14** is a rewording in terms of system features of corresponding method **claim 1** and corresponding **method claim 3**. Therefore, **claim 14** is not new.

Claim 15: see claim 10

Claims 16, 17 and 18: see claim 9

Claim 19: see claim 11

Claim 20: The addition of a video output port configured to format the reconstructed pictures for display is known from **D1 (figure 4, numeral 270, paragraph 66)**.